

CLAIMS

5 1. Pharmaceutical composition containing, as active ingredient, one or many NO synthase inhibitory substance(s) and one or many metabolic antioxidant substance(s) possessing at least two thiol groups and which intervene(s) in the redox status of thiol groups, and optionally a pharmaceutically acceptable support.

10 2. Pharmaceutical composition according to claim 1, containing, as active ingredient, a NO synthase inhibitory substance and a metabolic antioxidant substance.

10 3. Pharmaceutical composition according to one of claims 1 to 2, characterized in that the NO synthase inhibitory substance and the metabolic antioxidant substance are in separated form.

15 4. Pharmaceutical composition according to one of claims 1 to 3, in which the metabolic antioxidant is dithiothreitol, pyritinol, lipoic acid or its derivatives, the dimeric disulphide derivatives of penicillamine or N-acetylcysteine, or the peptides comprising at least two cysteine residues.

15 5. Pharmaceutical composition according to one of claims 1 to 2, characterized in that the NO synthase inhibitory substance and the metabolic antioxidant substance are in the form of a salt.

20 6. Pharmaceutical composition according to claim 5, characterized in that the salt is formed from a derivative of the NO synthase inhibitory substance containing at least one basic group and a derivative of the metabolic antioxidant substance containing at least one acid group.

25 7. Pharmaceutical composition according to one of claims 5 to 6, in which the metabolic antioxidant is lipoic acid or its derivatives, the dimeric disulphide derivatives of penicillamine or N-acetylcysteine, or the peptides containing at least two cysteine residues.

8. Pharmaceutical composition according to one of the preceding claims, in which the NO synthase inhibitor is a compound of amino acid type or a compound of the guanidine, isothiourea, nitro- or cyano-aryl, amino-pyridine or amino-pyrimidine, amidine, indazole or imidazole families.

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9. Pharmaceutical composition according to claim 8 in which the NO synthase inhibitor of amino-acid type is L-arginine, ornithine or lysine derivatives.

10. Pharmaceutical composition according to one of the preceding claims, in which the NO synthase inhibitor is chosen from L-nitro-arginine, L-nitro-arginine methyl ester, L-N-monomethylarginine, aminoguanidine, agmatine, 2-amino-1-(methylamino)benzimidazole, 5-nitro-indazole, 6-nitro-indazole, 7-nitro-indazole, 1,2-(trifluoromethylphenyl) imidazole, 2-amino-4-methyl-6-(2-aminoethyl)pyridine, 2-iminopiperidine, 2-iminohomopiperidine, 2-imino-5,6-dihydro-1,3-thiazine, 2-imino-5,6-dihydro-1,3-oxazine, 2-iminotetrahydropyrimidine, N-phenyl-2-thiophenecarboximidamide, S-ethylisothiourea, S-methyl-L-thiocitrulline or S-ethyl-L-thiocitrulline.

11. Pharmaceutical composition according to one of the preceding claims, in which the metabolic antioxidant is lipoic acid in racemic or enantiomeric form.

12. Pharmaceutical composition according to one of the preceding claims, in which the NO synthase inhibitor is a neuronal and/or inducible NO synthase inhibitor.

13. Product containing one or many NO synthase inhibitory substance(s) and one or many metabolic antioxidant substance(s) possessing at least two thiol groups and which intervene(s) in the redox status of thiol groups, as combination product in separated form, for simultaneous or sequential use in the treatment of pathologies in which nitrogen monoxide and the redox status of thiol groups are involved.

14. Product according to claim 13 for the treatment of pathologies such as cardiovascular and cerebrovascular disorders, septic shock, radioactive irradiation, solar radiation, organ transplants, disorders of the central or peripheral nervous system and more particularly Parkinson's disease, proliferative and inflammatory diseases, autoimmune and viral diseases, diabetes and its complications, autosomal genetic diseases and all the pathologies characterized by a production or a dysfunction of nitrogen monoxide and/or involving the redox status of thiol groups.

15. Product according to claim 14, for the treatment of cerebrovascular and cardiovascular disorders such as migraine, arterial hypertension, cardiac or cerebral infarctions of ischemic or haemorrhagic origin, ischemias and thromboses.

16. Product according to claim 14, for the treatment of disorders of the central or peripheral nervous system such as neurodegenerative diseases, and more particularly Parkinson's disease, pain, cerebral or bone marrow traumas, addiction to opiates,

alcohol and addictive substances, erectile and reproductive disorders, cognitive disorders, encephalopathies, depression, anxiety, schizophrenia, epilepsy, sleeping disorders, eating disorders.

5 17. Product according to claim 14, for the treatment of autoimmune and viral diseases such as lupus, AIDS, parasitic and viral infections, diabetes and its complications including retinopathies, nephropathies and polyneuropathies, multiple sclerosis, myopathies.

10 18. Product according to claim 14, for the treatment of proliferative and inflammatory diseases such as cancer, atherosclerosis, pulmonary hypertension, glomerulonephritis, portal hypertension, cataracts, psoriasis, arthrosis and rheumatoid arthritis, fibroses, amyloidoses, inflammations of the gastrointestinal system or the pulmonary system and airways.

15 19. Product according to one of claims 13 to 18, in which the NO synthase inhibitor is a compound of amino acid type or a compound of the guanidine, isothiourea, nitro- or cyano-aryl, amino-pyridine or amino-pyrimidine, amidine, indazole or imidazole families.

20 20. Product according to claim 19 in which the NO synthase inhibitor of amino-acid type is L-arginine, ornithine or lysine derivatives.

25 21. Product according to one of claims 13 to 20, in which the NO synthase inhibitor is chosen from L-nitro-arginine, L-nitro-arginine methyl ester, L-N-monomethylarginine, aminoguanidine, agmatine, 2-amino-1-(methylamino)benzimidazole, 5-nitro-indazole, 6-nitro-indazole, 7-nitro-indazole, 1,2-(trifluoromethylphenyl) imidazole, 2-amino-4-methyl-6-(2-aminoethyl)pyridine, 2-iminopiperidine, 2-iminohomopiperidine, 2-imino-5,6-dihydro-1,3-thiazine, 2-imino-5,6-dihydro-1,3-oxazine, 2-iminotetrahydropyrimidine, N-phenyl-2-thiophenecarboximidamide, S-ethylisothiourea, S-methyl-L-thiocitrulline or S-ethyl-L-thiocitrulline.

30 22. Product according to one of claims 13 to 21, in which the metabolic antioxidant is dithiothreitol, pyritinol, acid or its derivatives, the dimeric disulphide derivatives of penicillamine or N-acetylcysteine, or peptides comprising at least two cysteine residues.

23. Product according to one of claims 13 to 22, in which the metabolic antioxidant is lipoic acid, in racemic or enantiomeric form.

24. Product according to one of claims 13 to 23, in which the NO synthase inhibitor is a neuronal and/or inducible NO synthase inhibitor.

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